COPD for Primary Care

COPD is umbrella term for various clinical entities with multiple causes of *airflow obstruction* that is *not fully reversible*.

1) Risk Factors:
   a) ***Smoking*-#1 cause and should be assessed and addressed at each visit**
   b) Others
      i. Occupational exposure to dust/fumes/second-hand smoke
      ii. Serious childhood respiratory infection
      iii. GI Reflux
      iv. Alpha-1 Antitrypsin deficiency

2) Signs/Symptoms
   a) Chronic Cough or cough with sputum production
   b) Dsypnea on exertion
   c) Wheezing and chest tightness
   d) Fatigue

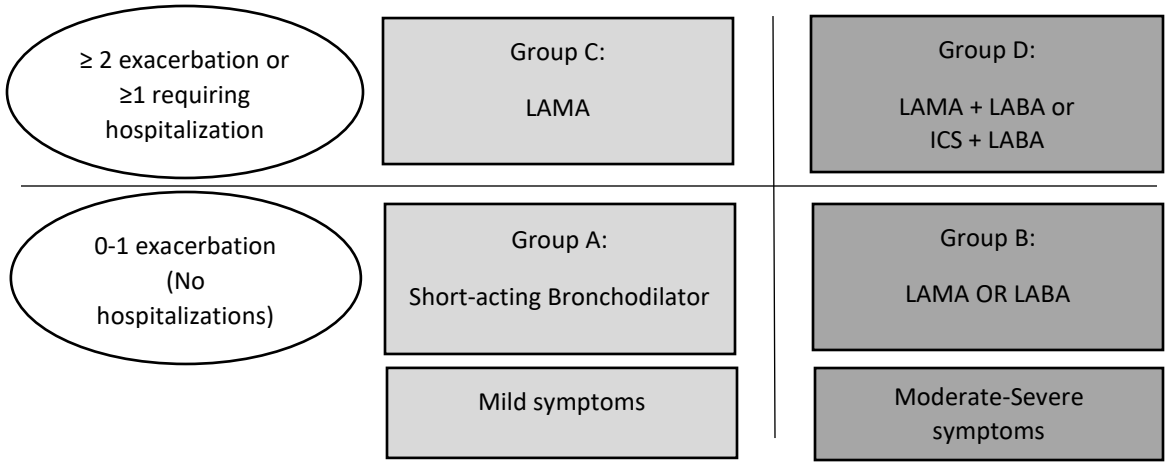
3) Diagnosis
   a) Screening spirometry for anyone with symptoms above
   b) Asymptomatic screening not recommended
   c) FEV1/FVC <0.7 confirms Airflow obstruction (BEGIN TREATMENT)
   d) Follow up with yearly spirometry if symptoms persist

4) Chronic Treatment
   a) SMOKING CESSATION
      i) Only treatment shown to prolong life and delay lung function decline
   b) Pulmonary Rehab
      ii) Increases exercise tolerance, decreases all cause mortality after COPD exacerbation
   c) Oxygen therapy
      iii) pO_2 <55 or O_2 Saturation <88% on Room Air
         (1) will prolong life but not decrease symptoms
   d) Medications:
      iv) See Next page for Medication flow chart
      v) Short Acting Bronchodilator for all (inhaler and nebulizer)

5) Acute Treatment/ COPD Exacerbations
   a) Short acting B_2 agonist (preferred by nebulization)
      vi) 1 treatment every 30-45 min x 3 before going to ER
         (1) Ensure patient has at home to use
   b) Systemic steroids
      i) Prednisone 40mg daily x 5 days
         (1) Higher doses/IV not proven to be better. Potentially prolongs hospitalization
   c) Antibiotics
      i) Only if purulent sputum (change in color or volume) for duration of 5-14 days

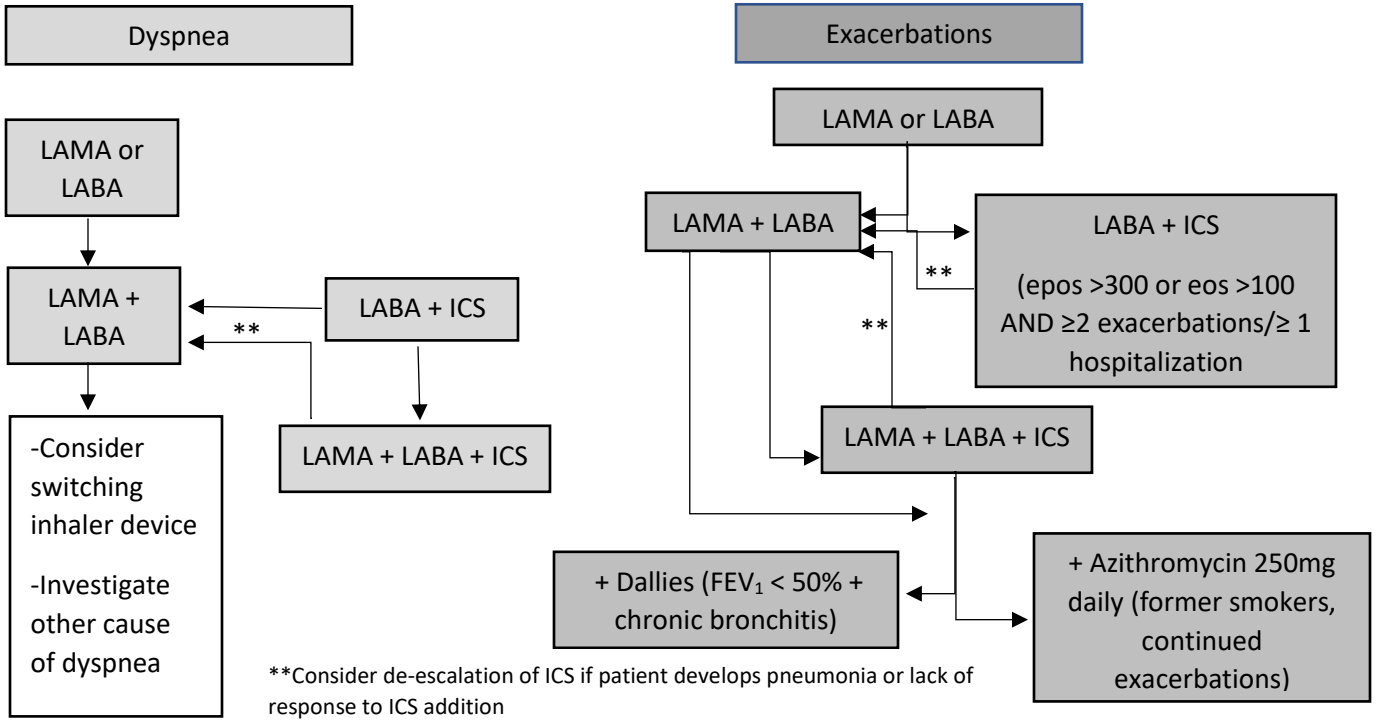
6) Post-hospitalization
   a) PULMONARY REHAB for all patients
   b) Advanced Care Planning
   c) Consider providing on hand steroids +/- antibiotics
   d) Consider Pulmonary referral

Initial Pharmacologic Treatment (Per GOLD Guidelines 2021)



Follow-Up Pharmacological Treatment (Per GOLD Guidelines 2021)

- If response to initial treatment is appropriate, maintain that therapy
- If not, consider predominant trait and treat according to below flow chart
- At each visit, *assess adherence and discuss inhaler technique* (critical to efficacy)



**Consider de-escalation of ICS if patient develops pneumonia or lack of response to ICS addition

LAMA (Long-Acting Muscarinic Antagonists)	
InCruse Ellipta (umeclidinium)	Once daily
Seebri Neohaler (glycopyrrolate)	Twice daily
Lonhala Magnair (glycopyrrolate for nebulizer)	Twice daily
Spiriva HandiHaler/Respimat (Tiotropium)	Once daily
Tudorza Pressair (aclidinium)	Twice daily
Yuperlri (revefenacin for nebulizer)	Once daily
LABA (Long-Acting Beta$_2$ Agonist)	
Servant (salmeterol)	Twice daily
Striverdi (olodaterol)	Once daily
LAMA + LABA Combination Inhalers	
Anoro Ellipta (umeclidinium + vilanterol)	Once daily
Bevespi (glycopyrrolate + formoterol)	Twice daily
Duaklir (aclidinium + formoterol)	Twice daily
Stiolto (tiotropium + olodaterol)	Once daily
Inhaled Corticosteroid (ICS) + LABA	
Advair Diskus/HFA (fluticasone + salmeterol) ***Diskus available as generic***	Twice daily
AirDuo Respiclick/Digihaler (fluticasone +salmeterol-lower salmeterol dose than Advair HFA) ***Respiclick available as generic***	Twice daily
Breo Ellipta (fluticasone + vilanterol)	Once daily
Dulera (mometasone + formoterol)	Twice daily
Symbicort (Budesonide + formoterol)	Twice daily
Wixela Inhub (fluticasone/salmeterol)	Twice daily
LAMA + LABA + ICS	
Breztri (glycopyrrolate+ formoterol + budesonide)	Twice daily
Enerzair (glycopyrrolate + indacterol + mometasone)	Once daily
Trelegy Ellipta (umeclidinium + vilanterol + fluticasone)	Once daily

References

1. Global Initiative for Chronic Obstructive Lung Disease. www.goldcopd.org. Accessed 5/9/2021

2. Celli BR, Wedzicha JA. Update on Clinical Aspects of Chronic Obstructive Pulmonary Disease. New England Journal of Medicine. 2019;381(3):1257-1266.

3. Lindenauer PK, Stefan MS, Pekow PS, et al. Association between initiation of pulmonary rehabilitation after hospitalization for COPD and 1-year survival among medicare beneficiaries. JAMA 2020;323(18):1813.

4. Albert RK, Connett J, Bailey WC, et al. Azithromycin for Prevenetion of Exacerbation of COPD. New England Journal of Medicine. 2011;365:689-698.